
Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2008; month=11; day=7; hr=16; min=8; sec=13; ms=78;]

Reviewer Comments:

<210> 1

<211> 20

<212> PRT

<213> Artifical Sequence

Per the above, please explain "Artificial" in sequence id# 1.

<210> 17

<211> 179

<212> PRT

<213> Artifical Sequence

<220>

<220>

<221> VARIANT

<222> 61, 421, 901, 1021 1381

<223> Xaa = Any Amino Acid

The above "Xaa" locations are invalid for sequence id# 17, there are only 179 amino acids appearing in the sequence. Please explain "Xaa" locations that are appearing in the sequence.

Validated By CRFValidator v 1.0.3

Application No: 10567938 Version No: 3.0

Input Set:

Output Set:

Started: 2008-10-06 16:50:15.032

Finished: 2008-10-06 16:50:22.814

Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 782 ms

Total Warnings: 17

Total Errors: 65

No. of SeqIDs Defined: 17

Actual SeqID Count: 17

Error code		Error Description
W	402	Undefined organism found in <213> in SEQ ID (1)
W	402	Undefined organism found in <213> in SEQ ID (2)
W	402	Undefined organism found in <213> in SEQ ID (3)
W	402	Undefined organism found in <213> in SEQ ID (4)
W	402	Undefined organism found in <213> in SEQ ID (5)
W	402	Undefined organism found in <213> in SEQ ID (6)
W	402	Undefined organism found in <213> in SEQ ID (7)
W	402	Undefined organism found in <213> in SEQ ID (8)
W	402	Undefined organism found in <213> in SEQ ID (9)
W	402	Undefined organism found in <213> in SEQ ID (10)
W	402	Undefined organism found in <213> in SEQ ID (11)
W	402	Undefined organism found in <213> in SEQ ID (12)
W	402	Undefined organism found in <213> in SEQ ID (13)
W	402	Undefined organism found in <213> in SEQ ID (14)
W	402	Undefined organism found in <213> in SEQ ID (15)
W	402	Undefined organism found in <213> in SEQ ID (16)
W	402	Undefined organism found in <213> in SEQ ID (17)
E	341	'Xaa' position not defined SEQID (17) POS (1)
Ε	341	'Xaa' position not defined SEQID (17) POS (2)
E	341	'Xaa' position not defined SEQID (17) POS (4)

Input Set:

Output Set:

Started: 2008-10-06 16:50:15.032 **Finished:** 2008-10-06 16:50:22.814

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Total Warnings: 17
Total Errors: 65
No. of SeqIDs Defined: 17

Actual SeqID Count: 17

Error code		Error Description
E	341	'Xaa' position not defined SEQID (17) POS (5)
E	341	'Xaa' position not defined SEQID (17) POS (7)
E	341	'Xaa' position not defined SEQID (17) POS (9)
E	341	'Xaa' position not defined SEQID (17) POS (12)
E	341	'Xaa' position not defined SEQID (17) POS (13)
E	341	'Xaa' position not defined SEQID (17) POS (14)
E	341	'Xaa' position not defined SEQID (17) POS (15)
E	341	'Xaa' position not defined SEQID (17) POS (16)
E	341	'Xaa' position not defined SEQID (17) POS (18)
E	341	'Xaa' position not defined SEQID (17) POS (19)
E	341	'Xaa' position not defined SEQID (17) POS (20)
E	341	'Xaa' position not defined SEQID (17) POS (22)
Ε	341	'Xaa' position not defined SEQID (17) POS (27)
E	341	'Xaa' position not defined SEQID (17) POS (30)
E	341	'Xaa' position not defined SEQID (17) POS (31)
Ε	341	'Xaa' position not defined SEQID (17) POS (34)
Ε	341	'Xaa' position not defined SEQID (17) POS (35) This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

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<110> PETER S.N. ROWE
<120> REGULATION OF TISSUE MINERALIZATION AND
     PHOSPHATE METABOLISM BY ASARM PEPTIDES
<130> 21105.0011U2
<140> 10567938
<141> 2006-07-13
<150> PCT/US04/30530
<151> 2003-09-19
<160> 17
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Ser Asp Gly Asp
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<213> Artifical Sequence
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                                 10
Gly Asp
<210> 3
<211> 18
<212> PRT
<213> Artifical Sequence
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1 5
                          10
Gly Asp
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<211> 19
<212> PRT
<213> Artifical Sequence
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Asp Gly Asp
<210> 5
<211> 44
<212> PRT
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<211> 44
<212> PRT
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<210> 4

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<213> Artifical Sequence
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   20
Ser Ser Ser Glu Ser Asp Gly Asp
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Gly Ser Ser Ser Glu Ser His Gly Asp
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<211> 40
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                           25
Ser Ser Ser Glu Ser Ser Gly Asp
     35
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<212> PRT

<210> 12 <211> 36 <212> PRT

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Ile Gly Ala Asp Ser Ser Glu Glu Lys Phe Leu Arg Arg Ile Gly Arg
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Phe Gly Tyr Gly
   35
<210> 13
<211> 180
<212> PRT
<213> Artifical Sequence
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Thr Lys Lys Pro Gly Tyr Asn Glu Ile Pro Glu Arg Glu Glu Asn Gly
                            25
Gly Asn Thr Ile Gly Thr Arg Asp Glu Thr Ala Lys Phe Ala Asp Ala
                        40
Val Asp Val Ser Leu Val Glu Gly Ser Asn Asp Ile Met Gly Ser Thr
                     55
Asn Phe Lys Glu Leu Pro Gly Arg Glu Gly Asn Arg Val Asp Ala Gly
                 70
                                    75
Ser Gln Asn Ala His Gln Gly Lys Val Glu Glu His Tyr Pro Pro Ala
                               90
Pro Ser Lys Glu Lys Arg Lys Glu Gly Ser Ser Asp Ala Ala Glu Ser
                            105
Thr Asn Tyr Asn Glu Ile Pro Lys Asn Gly Lys Gly Ser Thr Arg Lys
            120
       115
Gly Val Asp His Ser Asn Arg Asn Gln Ala Thr Leu Asn Glu Lys Gln
   130 135
                                       140
Arg Phe Pro Ser Lys Gly Lys Ser Gln Gly Leu Pro Ile Pro Ser Arg
                                  155
                 150
Gly Leu Asp Asn Glu Ile Lys Asn Leu Met Asp Ser Phe Asn Gly Pro
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                       170
Ser His Glu Asn
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<210> 14
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<212> PRT
<213> Artifical Sequence
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                                    15
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Gly Asn Thr Ile Gly Thr Gly Asp Glu Thr Ala Lys Ile Phe Ala Asp
                        40
                                           45
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Ala Val Asp Val Ser Leu Val Glu Gly Asn Asn Asp Ile Met Gly Ser

55

50

Thr Asn Phe Lys Glu Leu Pro Gly Arg Glu Gly Asn Arg Val Asp Val 75 Gly Gly Gln Asn Ala His Gln Gly Lys Val Glu Phe His Tyr Pro Pro 90 Ala Pro Ser Lys Glu Lys Arg Lys Glu Gly Ser Ser Asp Ala Thr Glu 100 105 110 Ser Thr Asn Tyr Asn Glu Ile Pro Lys Asn Asp Lys Gly Ser Ala Arg 115 120 125 Lys Gly Val Asp Asp Ser Asn Arg Asn Gln Ala Ile Leu His Glu Lys 130 135 140 Gln Arg Phe Pro Ser Lys Gly Lys Ser Gln Gly Leu Pro Ile Pro Ser 145 150 155 160 Arg Gly Leu Asp Asn Glu Ile Lys Thr Glu Met Asp Ser Leu Asn Gly 170 Pro Ser Asn Glu 180 <210> 15 <211> 169 <212> PRT <213> Artifical Sequence <400> 15 Arg Pro Leu Ser Gly Ser Ser Lys Ala Glu Val Ile Asp Pro His Met 1 5 10 Ser Gly Leu Gly Ser Asn Glu Ile Pro Gly Arg Glu Gly His Gly Gly 20 25 Ser Ala Tyr Ala Thr Arg Asp Lys Ala Ala Gln Gly Ala Gly Ser Ala 35 40 Gly Gly Ser Leu Val Gly Gly Ser Asn Glu Ile Ile Gly Ser Thr Asn 55 Phe Arg Glu Leu Pro Gly Lys Glu Gly Asn Arg Ile Asn Ala Gly Ser 65 70 75 80 Gln Asn Ala His Gln Gly Lys Val Glu Phe His Tyr Pro Gln Val Ala Ser Arg Glu Lys Val Lys Gly Gly Val Glu His Ala Gly Arg Ala Gly 100 105 110 Tyr Asn Glu Ile Pro Lys Ser Ser Lys Gly Ser Ser Ser Lys Asp Ala 115 120 125 Glu Glu Ser Lys Gly Asn Gln Leu Thr Leu Thr Ala Ser Gln Arg Phe 140 135 Pro Gly Lys Gly Lys Ser Gln Gly Pro Ala Leu Pro Ser His Ser Leu 145 150 155 Ser Asn Glu Val Lys Ser Glu Glu Asn 165 <210> 16 <211> 169 <212> PRT <213> Artifical Sequence

<400> 16

Arg Pro Leu Ser Gly Ser Ser Lys Ala Glu Val Ile Asp Pro His Met

1 5 10 15

Ser Gly Leu Gly Ser Asn Glu Ile Pro Gly Arg Glu Gly His Gly Gly

20 2.5

Ser Ala Tyr Ala Thr Arg Asp Lys Ala Ala Gln Gly Ala Gly Ser Ala 40 Gly Gly Ser Leu Val Gly Gly Ser Asn Glu Ile Ile Gly Ser Thr Asn 55 Phe Arg Glu Leu Pro Gly Lys Glu Gly Asn Arg Ile Asn Ala Gly Ser 70 75 Gln Asn Ala His Gln Gly Lys Val Glu Phe His Tyr Pro Gln Val Ala 85 90 Ser Arg Glu Lys Val Lys Gly Gly Val Glu His Ala Gly Arg Ala Gly 100 105 Tyr Asn Glu Ile Pro Lys Ser Ser Lys Gly Ser Ser Ser Lys Asp Ala 115 120 Glu Glu Ser Lys Gly Asn Gln Leu Thr Leu Thr Ala Ser Gln Arg Phe 135 Pro Gly Lys Gly Lys Ser Gln Gly Pro Ala Leu Pro Ser His Ser Leu 150 155 Ser Asn Glu Val Lys Ser Glu Glu Asn 165

<210> 17

<211> 179

<212> PRT

<213> Artifical Sequence

<220>

<223> Description of Artificial Sequence: Note = Synthetic Construct

<220>

<221> VARIANT

<222> 61, 421, 901, 1021 1381

<223> Xaa = Any Amino Acid

<400> 17

Xaa Xaa Gly Xaa Xaa Gly Xaa Ser Xaa Ala Glu Xaa Xaa Xaa Xaa 10 5 1 Ile Xaa Xaa Gly Xaa Asn Glu Ile Pro Xaa Arg Glu Xaa Xaa Gly 20 25 Gly Xaa Xaa Xaa Thr Arg Asp Xaa Thr Ala Xaa Xaa Ala Xaa Xaa 40 Xaa Val Ser Leu Val Glu Gly Xaa Asn Xaa Ile Xaa Gly Ser Ile Asn 55 Phe Xaa Leu Leu Pro Gly Xaa Glu Gly Asn Arg Val Asp Asp Gly Ser 75 Gln Asn Ala His Gln Gly Lys Val Phe Phe His Tyr Pro Xaa Ala Pro 85 90 Ser Lys Glu Lys Xaa Lys Xaa Gly Ser Xaa Xaa Xaa Xaa Xaa Xaa 105 100 Xaa Tyr Asn Glu Ile Pro Lys Xaa Xaa Lys Gly Ser Xaa Xaa Lys Xaa 120 Xaa Xaa Xaa Ser Xaa Xaa Asn Gln Xaa Thr Leu Xaa Glu Xaa Gln Arg

Phe Pro Xaa Lys Gly Lys Ser Gln Gly Ile Pro Ile Pro Ser Xaa Xaa 145 150 155 160 Leu Xaa Asn Glu Xaa Lys Xaa Glu Xaa Asp Ser Xaa Asn Gly Pro Ser

135

140

165 170 175

Xaa Glu Asn